

# 105VR/KR-V5090

## ADJUSTMENT

### FM SECTION INPUT SELECTOR : FM MODE X05-4700

NO.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	DISCRIMINATOR	(A) 98 MHz, 60dBμ (ANT INPUT) 1 kHz, ±40 kHz DEV : E/T/Q TYPE 1 kHz, ±75 kHz DEV (OTHER TYPE)	Connect a DC voltmeter between pin 1 and pin2 of CN2.	MONO 98.0 MHz	L31	0V	(a)
2	DISTORTION (STEREO)	(B) 98 MHz, 60dBμ (ANT INPUT) 1 kHz, ±40 kHz DEV : E/T/Q TYPE 1 kHz, ±67.5 kHz DEV PILOT ±7.5 kHz DEV OTHER TYPE	(E)	AUTO 98.0 MHz	L32 (EXCEPT K/P)	Minimum distortion.	(a)

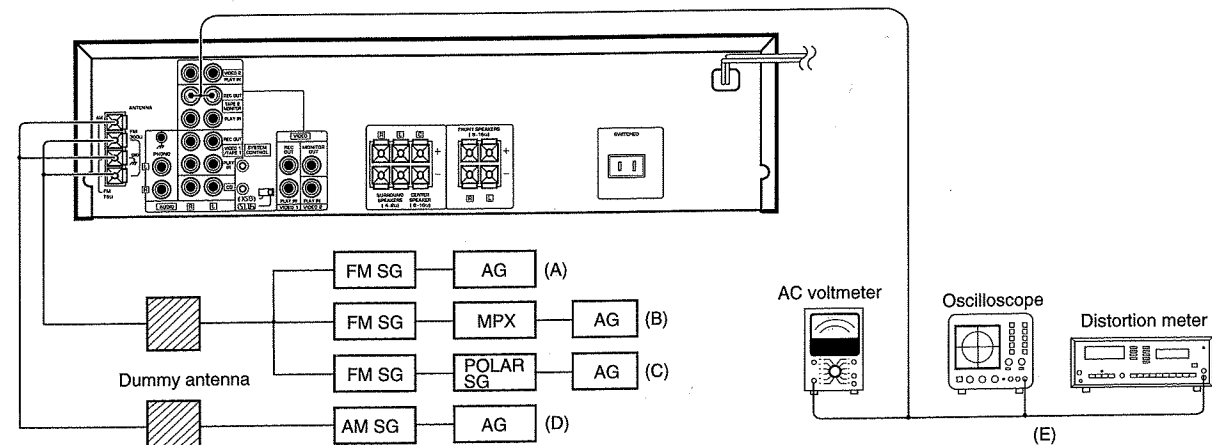
### X05-4690

NO.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	DISTORTION (STEREO)	(B) 98 MHz, 60dBμ (ANT INPUT) 1 kHz, ±67.5 kHz DEV PILOT: ±7.5 kHz DEV	(E)	AUTO 98.0 MHz	T1 (A1)	Minimum distortion.	(a)

### POLAR UNIT X04-1313 Q TYPE (65MHz~74MHz BAND)

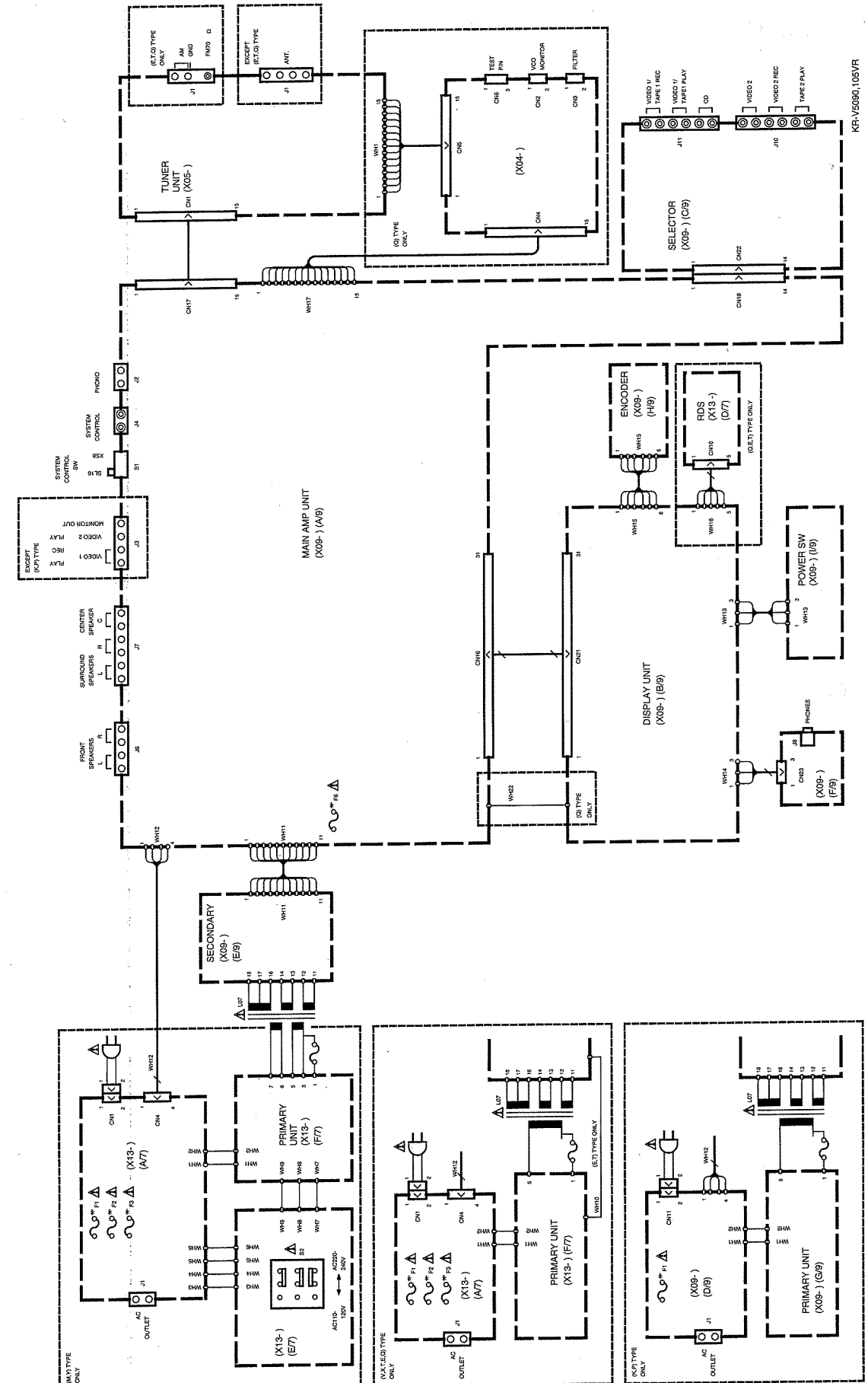
NO.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	VCO	(C) 69 MHz, 60dBμ (ANT INPUT) 1 kHz, 0 kHz DEV SUB, 0 kHz DEV	Connect a frequency counter to VCO monitor (CN2).	AUTO 69 MHz	VR 2	Adjust it the frequency counter reads 31.25 kHz ±100 kHz.	
2	SEPARATION	(C) 69 MHz, 60dBμ (ANT INPUT) 1 kHz, 40 kHz DEV SUB, 10 kHz DEV Select : L or R	Connect a oscilloscope to TUNER OUT (CN6).	AUTO 69 MHz	TC 1	Minimum crosstalk.	
3	SEPARATION	(C) SAME AS ABOVE	Connect a oscilloscope to TUNER OUT (CN6).	AUTO 69 MHz	VR 1	Minimum crosstalk.	

### INSTRUMENT CONNECTION



# 105VR/KR-V5090

## WIRING DIAGRAM

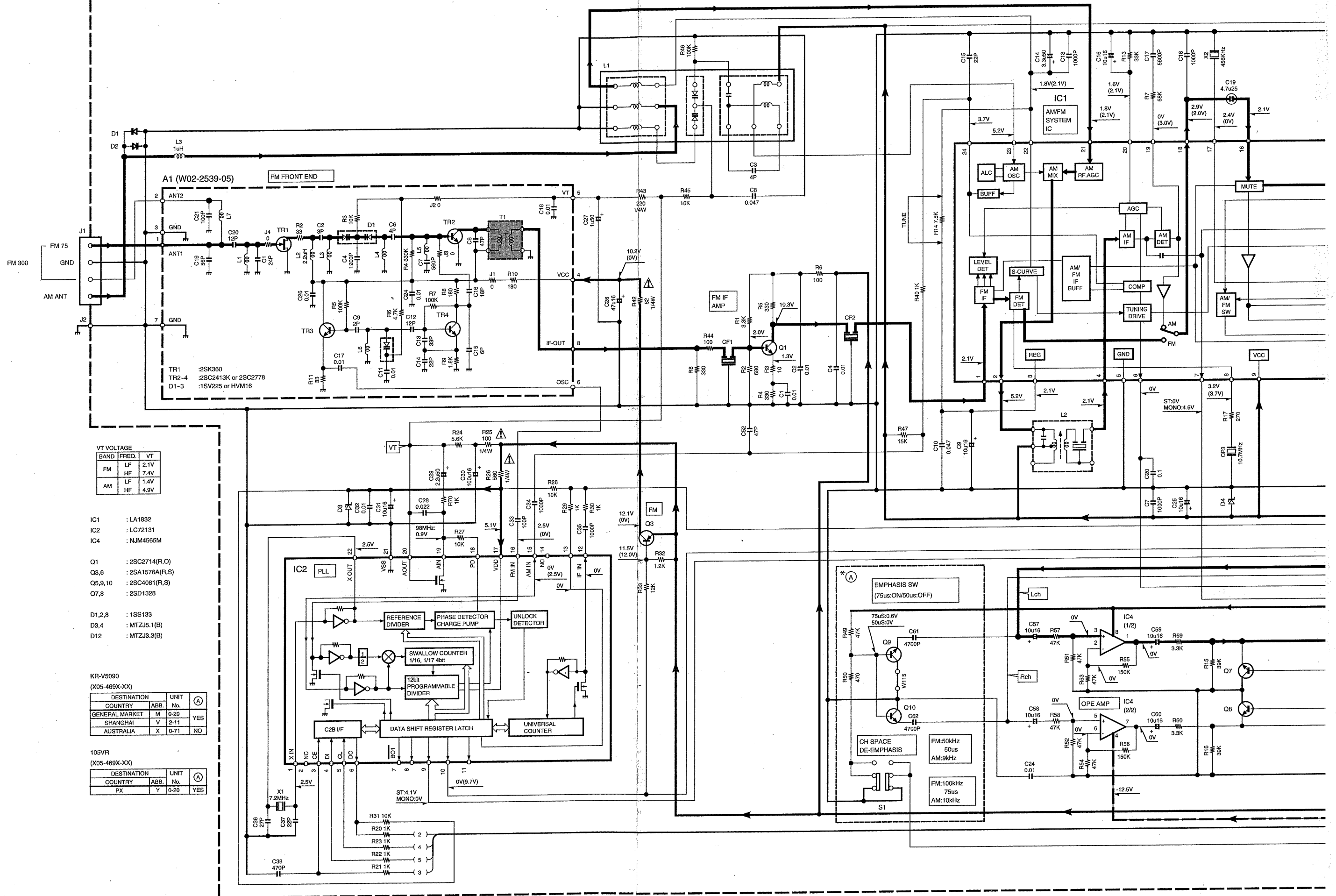


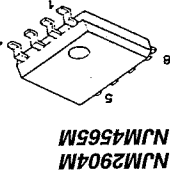
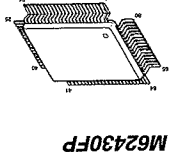
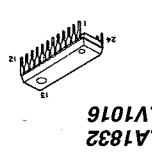
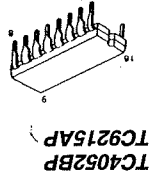
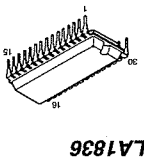
## A1 (W02-2539-05)





(X05-469X-XX) : M,V,X,Y TYPE

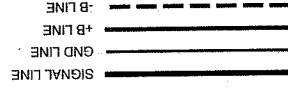
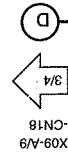
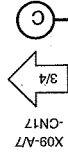
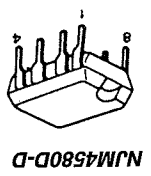
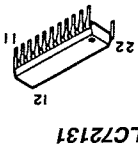
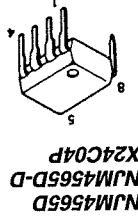




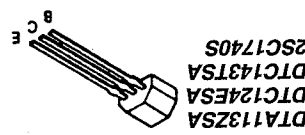
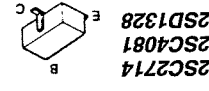
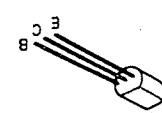
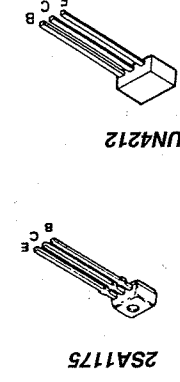
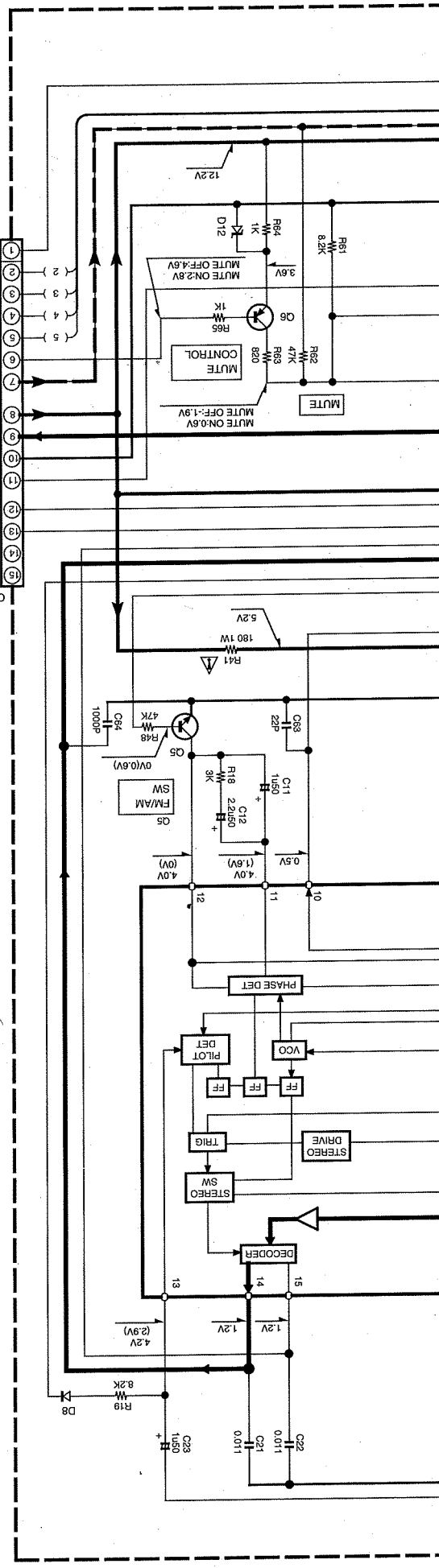
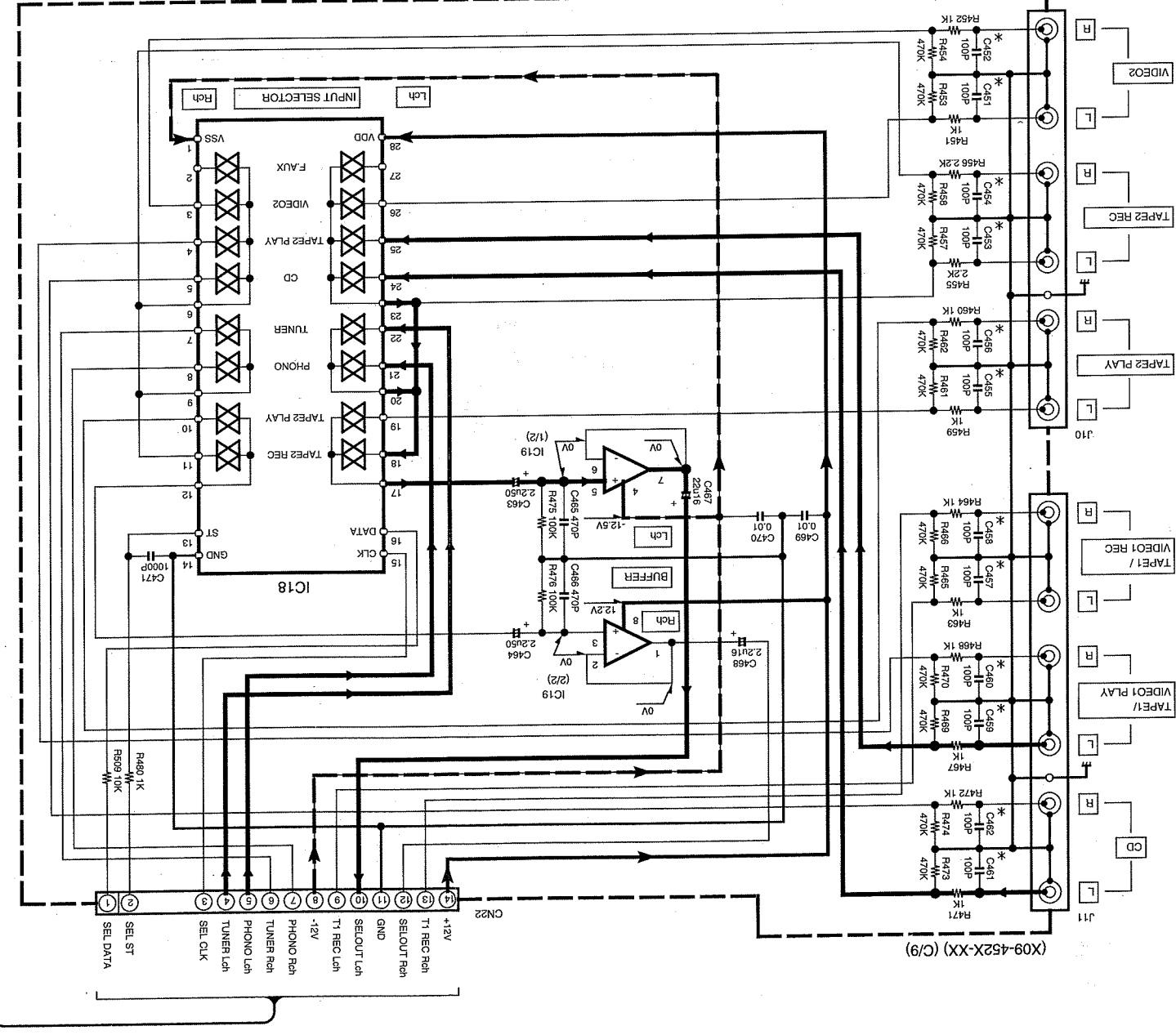
MODE	CARRIER	FREQUENCY	MODULATION	ANT INPUT
FM	98MHz	1kHz	STEREO 67.5kHz (Pilot)	60dB
AM	1000(999)kHz	400Hz	MONO 30% MOD	60dB

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuses(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

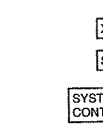
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and size(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

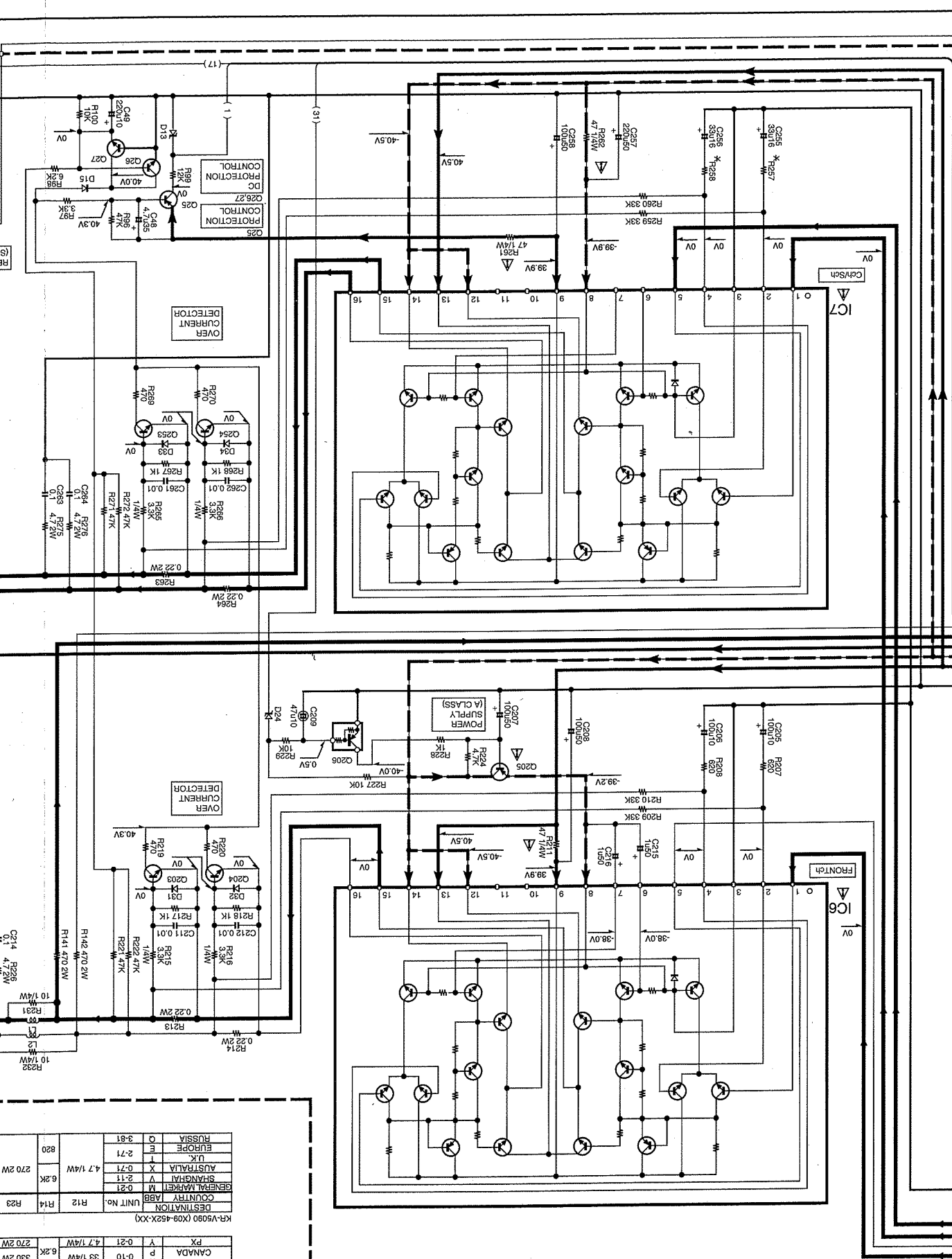
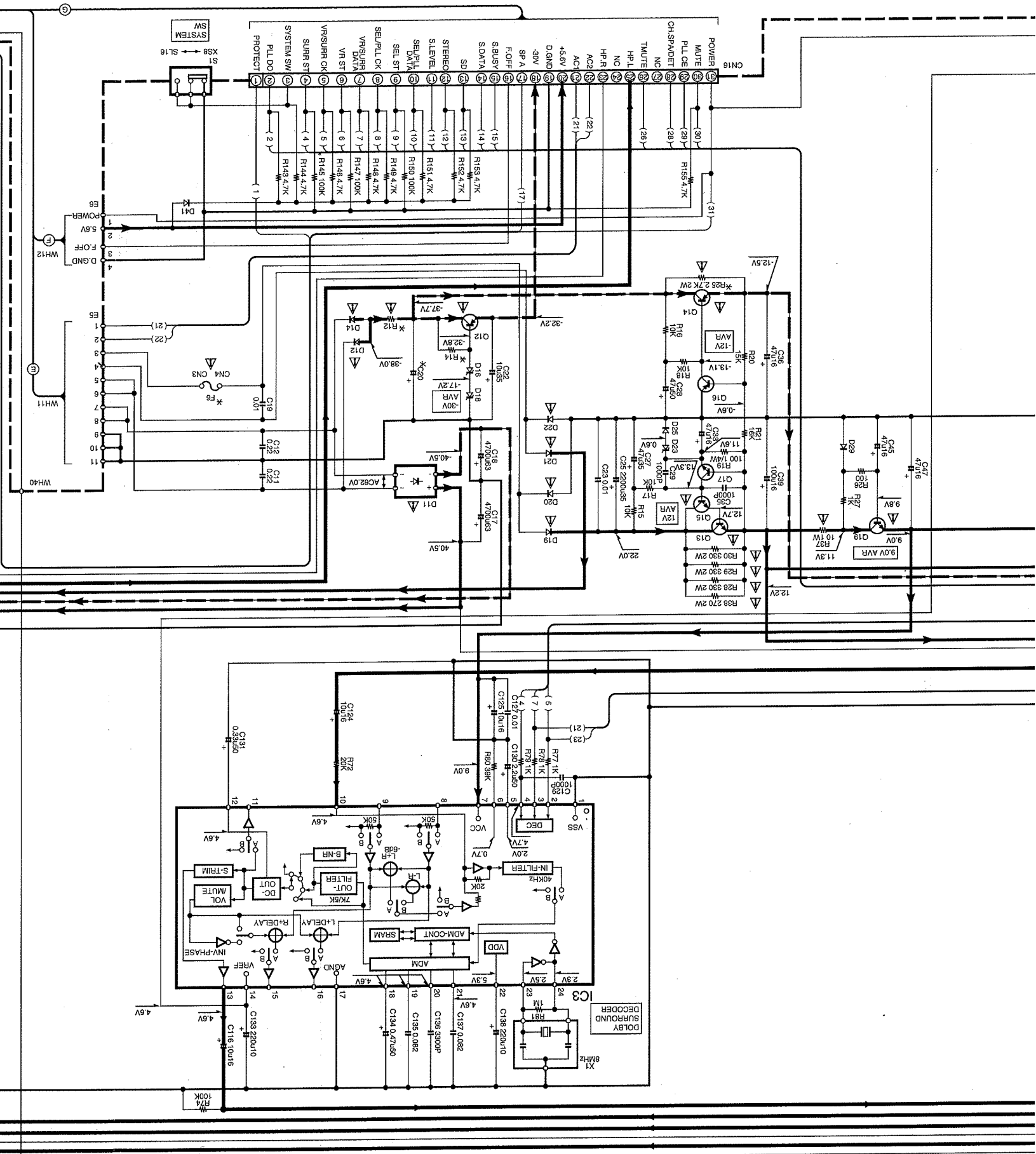
[illegible]

DESTINATION		UNIT	C451-462
COUNTRY	ABB.	NO.	
GENERAL MARKET	M	0-21	
SHANGHAI	V	2-11	
AUSTRALIA	X	0-71	
U.K.	T	2-71	
EUROPE	E	2-71	YES
RUSSIA	Q	3-81	

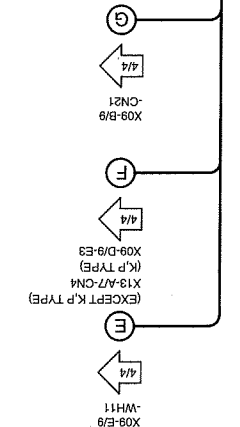








		DESTINATION		UNIT NO.	R12	R14	R23
		COUNTRY		LABB			
		K		0-10			
		CANADA					
		PX		Y			
		4.7 1/4W		0-21			
		6.2K					
		33 1/4W					
		330 2W					
		R23			R14		
		R12					
		4.7 1/4W					
		6.2K					
		270 2W					
		R23			R14		
		R12					
		4.7 1/4W					
		6.2K					
		270 2W					
		R23			R14		
		R12					
		4.7 1/4W					
		6.2K					
		270 2W					
		R23			R14		
		R12					
		4.7 1/4W					
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		270 2W					
		R23			R14		
		R12					
		4.7 1/4W					
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		R12					
		4.7 1/4W					
		6.2K					
		270 2W					
		R23			R14		
		R12					



- Q206 : DTA1132SA
- Q28 : DTC1132SA
- Q26,27,203,204 : 2SC1845(F,E)
- Q25,205 : 2SA992(F,E)
- Q19 : 2SC2878(B)
- Q18,21-24,201,202 : 2SC3940(A,R,S)
- Q16,29,30 : 2SA9393(S,Q,R)
- Q15,17 : 2SC1740(S,Q,R)
- Q14 : 2S91640
- Q13 : 2SD2525
- Q12 : 2SA1534(A,R,S)
- D41 : TS1313
- D28 : MT210(B)
- D24 : MT2121(B)
- D23,51,52 : MT2111(B)
- D17 : MT2139(B)
- D16,18 : MT215(B)
- D13,26,27 : MT215.1(B)
- D12,14,19,22 : S568B or 1SR139-400
- D11 : RBV-602LA
- D10,15,25,30-34 : 1S5131
- IC8 : NJM4550D-D
- IC6,7 : STK499-070
- IC5 : M62430FP
- IC4 : TC9215AP
- IC3 : LV1016
- IC2 : L42785
- IC1 : NJM279D

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105VR (X09-452X-XX)									
DESTINATION	UNIT No.	R12	R14	R23	R25	R173	R257	R258	C20
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
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GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
SHANGHAI	V	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
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EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
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COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
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RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
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GENERAL MARKS	M	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
COUNTRY	ABB	UNIT No. <th>R12</th> <th>R14</th> <th>R23</th> <th>R25</th> <th>R173</th> <th>R257</th> <th>R258</th>	R12	R14	R23	R25	R173	R257	R258
U.S.A.	K	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
CANADA	P	0-10	33 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
RUSSIA	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
EUROPE	E	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
U.K.	T	0-21	4.7 1/4W	6.2K	270 2W	NO	24K	180 220	220 50
AUSTRALIA	X	0-21							



BS

BT

BU

BV

BW

BX

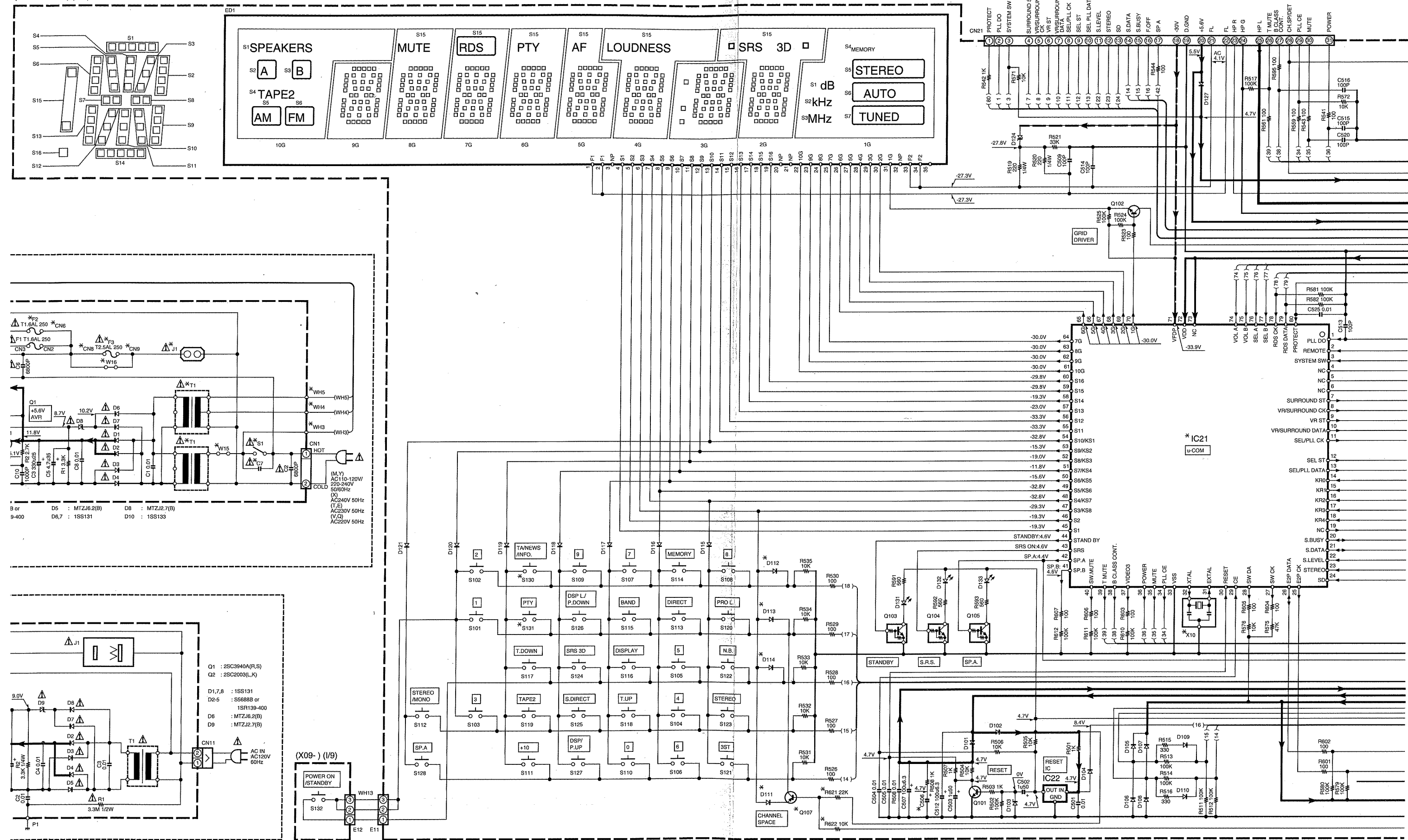
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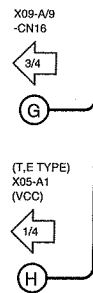
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CA

CB

(X09-452X-XX) (B/9)





**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

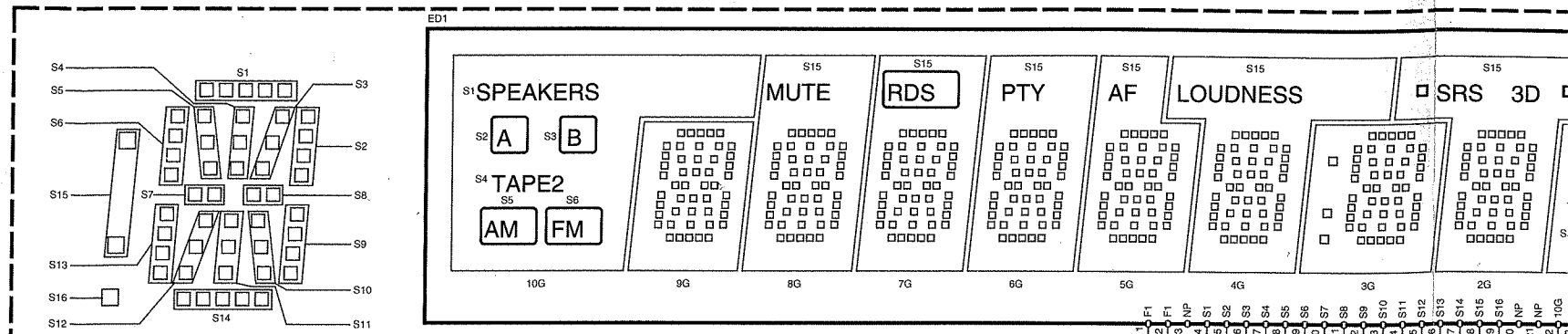
KR-V5090 (X13-745X-XX)

DESTINATION	UNIT	WH3-9	WH10	S1	S2	W14	W15	W16	W19	T1	F2	F3	CN6,7	CN8,9	C7	X13-D/7	J1
COUNTRY	ABB	No.															
GENERAL MARKET	M	10-20	YES	NO	YES	NO	YES	NO	NO	L07-2128-05	YES	NO	YES	NO	NO	NO	E03-0305-05
SHANGHAI	V	2-11															E03-0337-05
AUSTRALIA	X	0-71															E03-0325-05
U.K.	T	0-51	NO	YES	NO	YES	NO	NO	NO	L07-2128-05	NO	NO	NO	YES	YES	YES	E03-0109-05
EUROPE	E	2-71															E03-0305-05
RUSSIA	Q		YES														

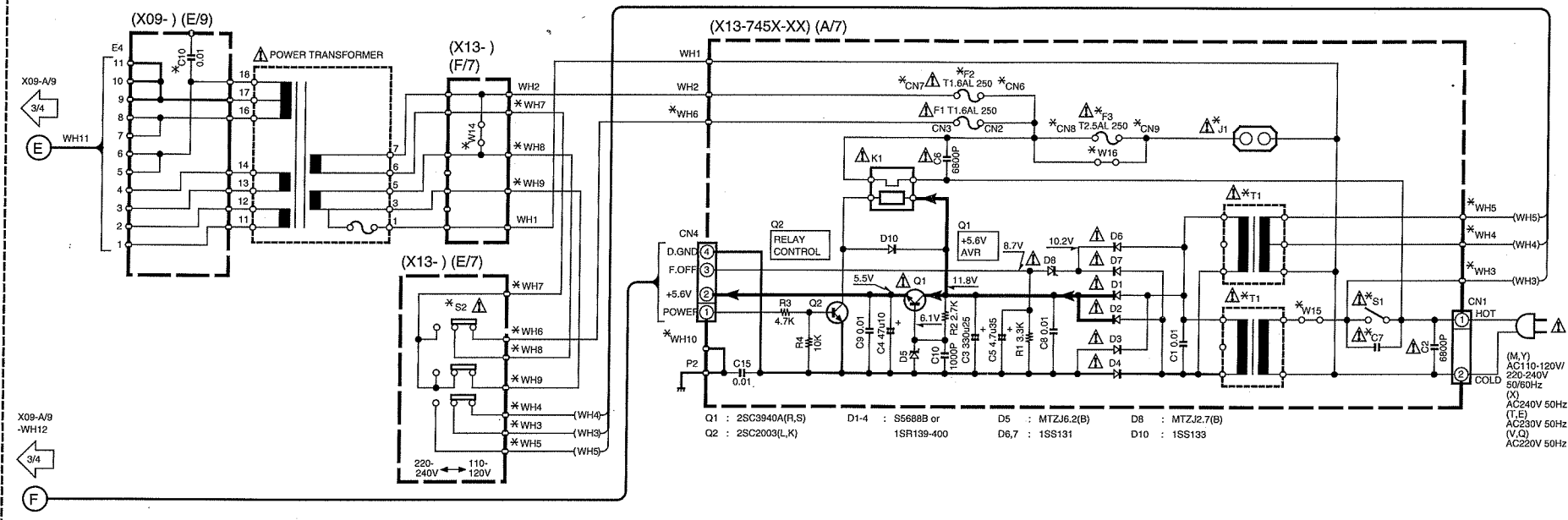
105VR (X13-745X-XX)

DESTINATION	UNIT	WH3-9	WH10	S1	S2	W14	W15	W16	W19	T1	F2	F3	CN6,7	CN8,9	C7	X13-D/7	J1
COUNTRY	ABB	No.															
GENERAL MARKET	Y	2-91	YES	NO	NO	YES	NO	YES	NO	L07-2128-05	YES	NO	YES	NO	NO	NO	E03-0318-05

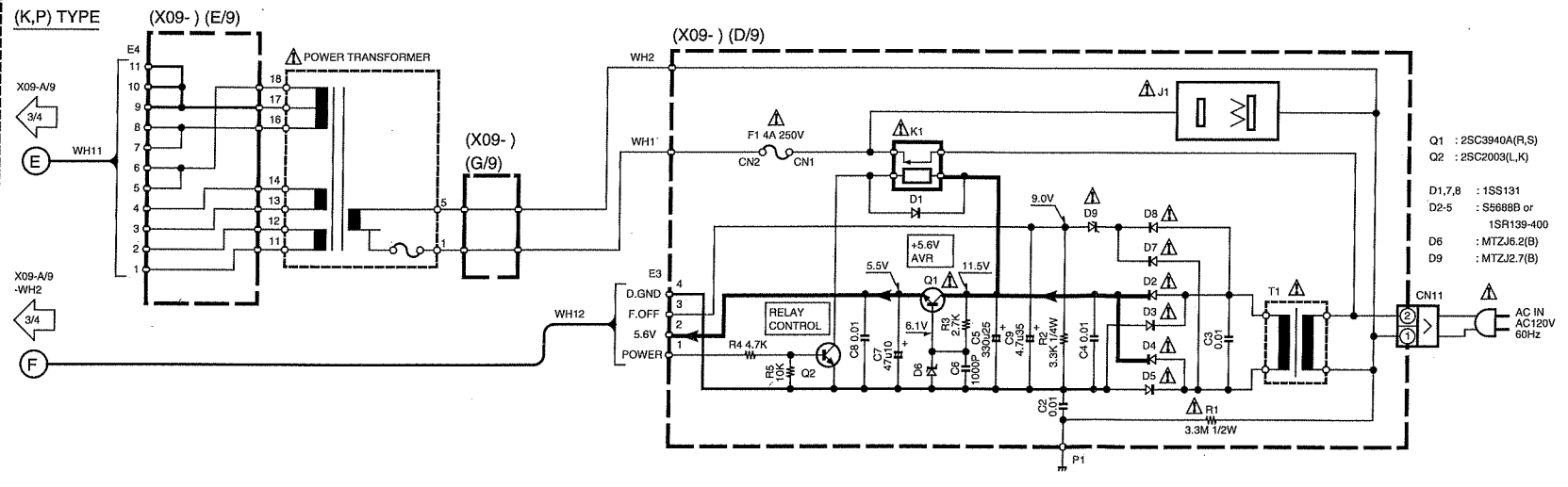
(X09-452X-XX) (B/9)



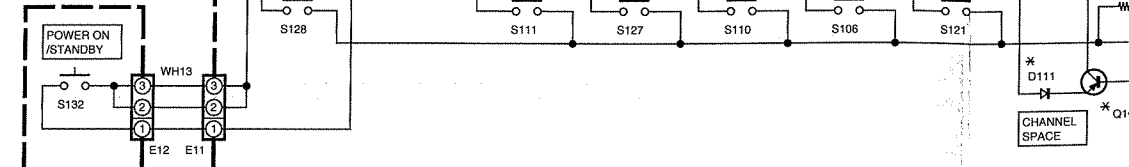
EXCEPT (K,P) TYPE



(K,P) TYPE



(X09-) (I/9)



KR-V5090,105VR(M) (4/4)

DESTINATION	UNIT	ABB.	NO.	DESTINATION	UNIT	ABB.	NO.
RUSSIA	Q	3-81	IC21	U.S.A.	K	0-10	IC23
EUROPE	E	2-71	IC22	CANADA	P	0-21	IC23
U.K.	T	2-71	IC23				
AUSTRALIA	X	0-21					
SHANGHAI	V	2-11					
GENERAL MARKET	M	0-21					
COUNTRY	ABB.	NO.					
IC21							
IC22							
IC23							
Q107							
D111							
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